

CLAIM SET AS AMENDED

1. (Currently Amended) Sheet tobacco comprising:

a tobacco powder layer containing a tobacco powder material and a binder; and

a carrier layer covering one side of said tobacco, powder layer and made of nonwoven plant fibers wherein the binder binds together the tobacco powder material in the tobacco layer and the nonwoven plant fibers in the carrier layer by infiltration into the carrier layer.

2. (Original) The sheet tobacco according to claim 1, further comprising a cover layer covering the other side of said tobacco powder layer and made of nonwoven plant fibers.

3. (Currently Amended) The sheet tobacco according to ~~claim 1~~ claim 2, wherein said tobacco powder layer has a basis weight of 30 to 200 g/m², and said carrier layer and said cover layer each have a basis weight of 3 to 50 g/m².

4. (Previously Presented) The sheet tobacco according to claim 1, wherein said tobacco powder layer has a binder content of not greater than 15% by weight with respect to the tobacco powder material.

5. (Currently Amended) The sheet tobacco according to ~~claim 1~~ claim 2, wherein the binder is used to bind the tobacco powder material and also to bind together the plant fibers of at least one of said carrier layer and said cover layer.

6. (Previously Presented) The sheet tobacco according to claim 1, wherein the binder contains cornstarch.

7. (Currently Amended) The sheet tobacco according to ~~any one of claim 1~~ claim 2, further comprising a tobacco particle layer sandwiched between said tobacco powder layer and said carrier layer or between said cover layer and said tobacco powder layer, said tobacco particle layer containing particles of tobacco stems and laminas.

8. (Withdrawn) A sheet tobacco manufacturing processor comprising:

- a preparing step of preparing a carrier sheet of nonwoven plant fibers;
- a forming step of spreading a tobacco powder material

on said carrier sheet to form a tobacco powder layer covering one side of said carrier sheet;

- an adding step of adding a binder to said tobacco powder layer during or after said forming

step; and

- a binding step of binding the tobacco powder material in said tobacco powder layer as well

as said tobacco powder layer and said carrier sheet to each other by means of the binder.

9. (Withdrawn) The process according to claim 8, wherein said carrier sheet is formed in said preparing step by a dry nonwoven fabric production process, and said forming step is performed continuously following the formation of said carrier sheet to form said tobacco powder layer on the one side of said carrier sheet.

10. (Withdrawn) The process according to claim 8, further comprising an intermediate step performed between said forming step and said binding step, to form a cover sheet of nonwoven plant fibers covering the other side of said tobacco powder layer.

11. (Withdrawn) The process according to claim 10, wherein said intermediate step is performed following the formation of said tobacco powder layer, to form said cover sheet by a dry nonwoven fabric production process.

12. (Withdrawn) The process according to claim 8, wherein in said binding step, the plant fibers of at least one of said carrier sheet and said cover sheet are bound together by means of the binder.

13. (Withdrawn) The process according to claim 8, wherein in said adding step, a binder of powder form is added during the formation of said tobacco powder layer.

14. (Withdrawn) The process according to claim 13, wherein the binder contains cornstarch.

15. (Withdrawn) The process according to claim 13, further comprising an infiltrating step performed prior to said binding step, to cause a solvent for the binder to infiltrate into said tobacco powder layer admixed with the binder as well as into said carrier sheet .

16. (Withdrawn) The process according to claim 15, wherein in said binding step, said tobacco powder layer and said carrier sheet are pressed with heat applied thereto.

17. (Withdrawn) The process according to claim 8, further comprising a step of forming a tobacco particle layer or between said tobacco powder layer and said cover sheet, said tobacco particle layer containing particles of tobacco stems and laminas.

18. (Withdrawn) A sheet tobacco manufacturing system comprising:

an endless net conveyor traveling in one direction;

an upstream-side forming device arranged at an upstream portion of said net conveyor, for forming a carrier sheet of nonwoven plant fibers on said net conveyor;

a powder spreading device arranged on a downstream side of said upstream-side forming device, for spreading a tobacco powder material on the carrier sheet to form a tobacco powder layer covering the carrier sheet; and

a pressing device arranged on a downstream side of said powder spreading device, for heating and pressing the carrier sheet and the tobacco powder layer.

19. (Withdrawn) The system according to claim 18, further comprising a spraying device arranged on an upstream side of said upstream-side forming device, for wetting in advance said net conveyor with a predetermined liquid.

20. (Withdrawn) The system according to claim 18, further comprising a downstream-side forming device arranged between said powder spreading device and said pressing machine, for forming a cover sheet of nonwoven plant fibers covering the tobacco powder layer.

21. (Withdrawn) The system according to claim 20, wherein said downstream-side forming device includes a fiber spreading unit arranged above said net conveyor for spreading plant fibers toward said net conveyor, a mesh conveyor arranged between the fiber spreading unit and said net conveyor, the mesh conveyor sucking thereon the plant fibers spread from the fiber spreading unit to form a cover sheet and transporting the cover sheet toward said net conveyor, and peeling means for peeling the cover sheet from the mesh conveyor to allow the cover sheet on the mesh conveyor to be transferred onto the tobacco powder layer.

22. (New) The sheet tobacco according to claim 2, wherein the binder binds together the nonwoven plant fibers in the cover layer by infiltration into the cover layer.

23. (New) The sheet tobacco according to claim 2, wherein the binder binds the tobacco powder layer to the carrier layer and to the cover layer.

24. (New) Sheet tobacco comprising:
a carrier layer made of nonwoven fabric, the nonwoven fabric including plant fibers; and
a tobacco powder layer covering one side of said carrier layer, said tobacco powder layer containing a tobacco powder material and a binder for binding together the plant fibers in the nonwoven fabric and the tobacco powder material in the tobacco powder layer.

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-24 are pending. Claims 1, 8 and 18 are independent. Claims 1, 3, 5 and 7 are amended. Claims 4 and 6 are indicated as being previously presented. Claims 8-21 are withdrawn from consideration. Claims 22-24 are added. Accordingly, reconsideration of the present application is respectfully requested.

Priority Under 35 USC §119

The Office Action acknowledges the claim for foreign priority under 35 USC §119 based on the priority document JP 11-157934. The Office Action states however that a certified copy of this foreign priority document has not been filed with the USPTO. A certified copy of JP 11-157934 was submitted to the U.S. Patent and Trademark Office on July 2, 2000. It is respectfully requested that the Examiner confirm receipt of the certified copy in the next office communication.

Information Disclosure Statement

An Information Disclosure Statement (IDS) was submitted to the U.S. Patent and Trademark Office on December 4, 2001. Applicants hereby confirm receipt of the initialed PTO-1449 form attached to this IDS. However, an IDS was also submitted to the U.S. Patent and Trademark Office on July 2, 2003. It is requested that the Examiner initial the PTO-1449 form attached thereto and forward a copy with the next office communication to indicate consideration of the reference listed thereon.

Rejection Under 35 USC §112, second paragraph

Claims 3, 5 and 7 are rejected under 35 USC §112, second paragraph, as being indefinite. Claims 3, 5 and 7 are amended to comply with the requirements of 35 USC §112, second paragraph, accordingly, it is respectfully requested that the rejection under 25 USC §112, second paragraph be withdrawn.

Rejection Under 35 USC §103(a)

Claims 1-7 are rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 4,768,527 to Graves, Jr. This rejection is respectfully traversed.

While not conceding the appropriateness of the rejection of the claims, but merely to expedite prosecution of the instant application, independent claim 1 is amended to recite a combination of elements in a sheet tobacco, including a carrier layer covering one side of said tobacco powder layer and made of nonwoven plant fibers, wherein the binder binds together the tobacco powder material in the tobacco powder layer and the nonwoven plant fibers in the carrier layer by infiltration into the carrier layer.

It is respectfully submitted that independent claim 1 is not disclosed by or made obvious over the applied prior art of record, including Graves, Jr. Graves, Jr. greatly differs from the presently claimed invention in that the carrier layer in Graves, Jr. is not made of a nonwoven as required by independent claim 1.

In contrast to applicant's claimed invention, Graves, Jr. discloses a multi-layered sheet like material 50 having a center layer 52 and outer or surface layers 54 and 56, as shown in Fig. 2.

Adhesion between the various layers is provided by filler material and binding agents which may be present in the fill materials. The layers themselves can be made of fibrous tobacco stem containing material, tobacco dust and a binding agent. The present invention however does not make use of filler material, but rather uses a binding agent in one layer which infiltrates another layer and binds together the material in the other layer. Graves, Jr. does not teach or suggest a binder in the tobacco powder layer which binds together the tobacco powder material and the nonwoven plant fibers in the carrier layer by infiltration into the carrier layer, as recited in independent claim 1 as amended.

Added dependent claims 22-24 recite additional aspects of the present invention. It is respectfully submitted that claims 22-24 do not introduce new matter and are not disclosed by the applied prior art of record.

Accordingly, reconsideration and withdrawal of the rejection of claim 1 under 35 USC §103(a) is respectfully requested. The dependent claims depend from an allowable independent claim and are therefore allowable at least because of their dependency from the allowable independent claim and for the additional limitations contained therein.

Conclusion

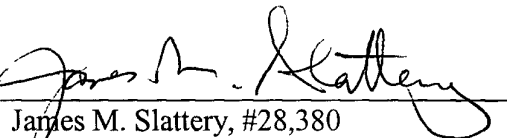
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Sam Bhattacharya (Reg. No. 48,107) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Notice of Non-Compliant Amendment